



More soil tests, more often to boost fertiliser efficiency

From DairySA Soil Nutrients project

Agronomists are urging dairy farmers across the state to test individual paddocks annually to get the most out of their fertiliser applications, following early successful outcomes from a DairySA soil management project.

Forty-two dairy farms spread throughout the Upper South East, Fleurieu Peninsula and Barossa/Mid North have been involved in the *Dairy Soil Nutrients* project. The project is designed to help farmers identify, map and monitor soil acidity and nutrients levels in individual paddocks, with the aim to maximise fertiliser efficiency and reduce nutrients loads into the environment.

Dairying for Tomorrow Coordinator, Monique White, says participant feedback at the midway point of the project has been overwhelmingly positive, with many farmers adjusting their fertiliser programs almost immediately.

“We know that 96 percent of people involved in the project have improved their knowledge of soil fertility on their farms, and 90 percent say the soil testing they’ve carried out has led them to change their farm fertiliser plans—that’s an incredibly positive response,” she said.

Farmer groups have been working closely with local agronomists throughout the project to help understand the results and adapt their existing fertiliser plans, and to build a local knowledge base so people outside the project can also benefit from the findings.

“What we’re hearing from the agronomists is that the most significant development from the project has been the ability to treat paddocks individually to correct specific nutritional deficiencies, rather than treating the whole farm with a traditional blanket fertiliser application. They’re saying it has changed their thinking in terms of what they need to be aware of, and what types of fertiliser they’ll be recommending to their clients from here on,” Monique said.

Data from soil test results is collated into colour-coded farm fertility maps highlighting nutrient levels and requirements, giving farmers and their advisors the knowledge to design a fertiliser plan that matches the nutritional needs across the whole farm.

“Farmers are telling us that the comprehensive farm fertility maps have been a really useful tool that makes soil test results real for them—mostly because they can distinguish where things are happening across the farm at a glance,” she said. “Mapping such as ArcGIS is expensive and more complex to learn, but we know that people relate far better to soil testing results presented in a map than in a table. So, we need to communicate the value of these maps to other agronomists, and provided we identify a simple mapping process, this would be very appealing to farmers.”

Monique says farmers are feeling more empowered with the knowledge they are acquiring. “Many farmers are excited about the prospect of prioritising and targeting their inputs to address less fertile areas and reduce fertiliser in areas that are not so deficient.

“In general, we hope to see dairy farmers working with their advisors to conduct more soil testing, more often—and testing all their paddocks so they can really target their fertiliser to get the most out of it.”

The Reducing Soil Acidification through Nutrient Management in South Australia: Dairy Soil Nutrients project is funded by the Australian Government’s Caring for our Country program, Dairy Australia and DairySA.